Laser & photonics giant

Newport Corporation is to purchase Thermo Electron Corp's optical technology business Spectra-Physics, for $300m ($200m in cash, $50m in Newport common stock, and a $50m promissory note of 5% interest repayable in 2009), creating a major photonics entity.

Robert Deuster, Newport Corp's chair and CEO, said: "This unique combination brings together what we believe is the technology leader in lasers and in photonics instrumentation, motion control and automation."

Charles Cargile, Newport's CFO expects sales to exceed $420m in 2005, gross margins to be in the 39-41% range and believes the business can support $0.5bn in annual sales, gross margins in excess of 40% and double-digit operating margins.

Newport will have more than 2 000 employees and 15 manufacturing sites in five countries.

Robert Phillippy, VP and GM for Newport's Industrial & Scientific Technologies division in the US becomes Newport's president and COO.

Guy Broadbent, Spectra-Physics' president, is to remain at Thermo Electron.

Source improves colour calibrations

NIST has developed a 'rainbow source' that can be tuned across the entire visible light spectrum, from red to blue light. This unique source exploits recent materials advances in light-emitting diodes (LEDs) of different colors. By mixing exact percentages of LEDs at different wavelengths of visible light with the desired brightness, the optical properties of the source (such as the colour) can be changed and tailored for a particular application.

The source uses commercial LEDs. NIST researchers characterised them and developed the packaging, electronics and software. In addition, the tunable light source is highly portable. It is a sphere about 30 cm in diameter and weighs about two 2 kgs. Battery operated versions have been developed for field applications.

NIST's new portable "rainbow" source for calibrating colour measurement instruments. In the background are a sampling of colours generated with the source.

InP SLEDs light networks

Superluminescent LEDs are now deployed in optical networks carrying revenue-generating traffic, says Singapore based Denselight Semiconductors, which claims its SLEDs are the only such devices to be Telcordia-qualified for optical networking. Beginning volume shipments of SLEDs last year, it recently secured a volume purchase agreement from a telecommunications customer. With $30m funding by venture capital group 3i, Denselight makes photonic ICs for a range of applications.

It uses QW intermixing to integrate optical functions on a chip and its SLEDs are used in defense, diagnostics, spectroscopy and sensing.

Promising pilot for Cyberlux

Cyberlux Corp, developer and manufacturer of optoelectronic diodal illumination products, has received an purchase order from the City of Cleveland, Ohio for the pilot phase implementation of its emergency lighting augmentation system product which, if successful, could extend to 160 buildings.

Michael G. Konicek, director, department of public utilities, City of Cleveland, said "Cyberlux has demonstrated its ability to install products which provide emergency lighting for up to sixty hours from one battery set. This long-term light life offers an element of safety in stairwells, elevator cabs, restrooms, offices and corridors that has been unavailable from traditional lighting elements."

The ELAS product retrofits into existing fluorescent fixtures. Its control module is connected to the ballast of the fixture and contains a constant charge battery and a patented sensor. The sensor differentiates between 'power-off at the wall switch' and 'power-out in the building's electrical service'. Light intensity is determined by the number of lighting elements that are connected in series – ranging from 'moonlight' to 'daylight' consistent with the space needs.

In financial statements for the quarter ended March 31, 2004 revenues were $9,968 compared to no revenue in the comparable '03 period. President Mark Schmidt, noted "A private placement financing which continued beyond December 31, 2003 audit cut off date, caused a substantial debt reduction, over $1.2m retired in early 2004, to be unrecorded in the year-end 2003 numbers." The company is now positioned to apply capital resources to new product development and inventory expansion.

LED's one step design and install

BivarOpto introduced RGB surface mounted LEDs for use with the company's Flexible Light Pipes. This creates a new, one-step design and installation solution while offering unlimited display colours and lighting versatility in a device that eliminates the need for through-hole PCBs typically required for installation of light pipes.

The new design methodology is for status indicators for office equipment, industrial controls, scientific and medical displays, PCI-based systems and telecommunications. Provided on tape and reel quantities of 500, this complements all surface mount device assembly processes and automated insertion plant equipment.

Directing light transmission through the FLP, the housing is illuminated by the LED colour, providing an easily locatable source at board level.